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AUTHOR Kaufman, Mabel
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ABSTRACT

This is a speculative but systematic study that focuses on teaching not as a science but as an art, the term "science" being reserved for such disciplines as psychology. In this paper, teaching is examined as an aesthetically structured as well as technically delineated symbol of human communication and interaction. It is stated that, in using such an approach, individual teaching styles which have their own expressiveness may then be examined and valued. A model which was prepared and put into practice is described and discussed. The model is divided into categories of balance, rhythm, expressiveness and unity; and under these terms are discussed such factors as movement in space, aesthetic distance, selectivity, and tone. A selected bibliography is included. (JA)

A MODEL FOR THE STUDY OF TEACHING

BASED ON AN AESTHETIC MODE OF INQUIRY

MABEL KAUFMAN

Department of Elementary Education
The City College
City University of New York

A Model for the Study of Teaching Based on an Aesthetic Mode of Inquiry[1]

In writing about education in general or teaching in particular, educators and others concerned with education have tended to refer rather broadly to "the art and science" of teaching. Yet in 1892 when William James delivered his Talks to Teachers in Cambridge, he drew a clear distinction between science and teaching. He stated, "Psychology is a science, and teaching is an art; and sciences never generate arts directly out of themselves. An intermediary inventive mind must make the application, by using its originality."[2]

Nevertheless, through the decades the science of teaching has been more and more carefully delineated and studied. The scientific nature of psychology, which lends itself readily to systematic and logical analysis, proved a useful key in unlocking some of the complexities of classroom teaching. Studies of classroom social climate (Lippitt and White 1958), of cognitive levels of student responses (Aschner 1971, Taba 1964), of teacher-pupil interaction (Flanders 1960) reflect this approach. Some of the more recent investigations of classroom verbal behavior draw upon concepts from philosophy and linguistics (Bellack, Kliebard, Hyman and Smith, Jr. 1966) and others examine the

[1]This work is based on the doctoral dissertation, "A Model for the Study of Teaching Based on an Aesthetic Mode of Inquiry" by Mabel Kaufman, Teachers College, Columbia University, New York, N. Y., 1970. It is available from University Microfilms, P. O. Box 1346, Ann Arbor, Michigan 48106; order number 71-1104.

technology of teaching (Skinner 1968). In many instances the investigators make reference to the art of teaching but do not clarify their meanings. The affect attached to this "art" and the accompanying veil of mystery that surrounds discussion or reference to it warrant study of teaching from another point of view, one that is compatible with study of the arts.

This study focuses specifically on the art of teaching. In it teaching is examined as an aesthetically structured as well as a technically delineated symbol of human communication and interaction. The operating metaphor is artistic and the language and concepts explored find roots in the various arts and aesthetics.[2] As an aesthetic structure it shares some commonalities with other art forms though the applications of these commonalities are particular to teaching. Teaching, thus examined, generates a qualitative component which resists precise, scientific inquiry but which may nevertheless be experienced through critical and systematic modes of knowing. Using such an approach individual teaching styles which have their own expressiveness may be examined and valued intrinsically. This descriptive study of the art of teaching which, though speculative, is also systematic, should, at a minimum, open the way to further discourse in an area heretofore only vaguely defined. More hopefully, however, the model or instrument produced in the

[2]William James, Talks to Teachers. New York: W. W. Norton and Company, 1958, pp. 23-24.

course of the study may prove a useful guide in training teachers and a constructive research tool in observing teaching practices. Pertinent relationships between teaching styles and other classroom variables may then be examined for mutual correspondences and frest insights.

METHOD

A preliminary step concerned itself with examination of literature relative to the arts and to various aesthetic approaches. These readings in aesthetics (Beardsley 1966, Langer 1942, 1953, Read 1966, Emond 1964, Bell 1924, Valery 1964, Dewey 1934, Stolnitz 1966), art (Feldman 1967, DeLong, Egner and Thomas 1965, Mondrian 1964, Beckmann 1964), art education (Kaufman 1964), music (Hindemith 1953), theatre (J. L. Styan 1960, Heffner 1959), and psychology of the arts (Arnheim 1967) revealed general characteristics or qualities shared and valued by the arts which also seemed to have implications for the study of teaching. For example, four broad areas, balance, rhythm, expressiveness and unity, seemed to be of concern in the different art disciplines. Within these broad categories, however, differences which were more particular to a given art form were evident. Through a process of moving back and forth from the arts to teaching, by studying the commonalities among the former and relating them to possible implications for teaching, a model which includes a language and rationale for a descriptive study of teaching based on an aesthetic mode of inquiry evolved. A schematic visualization of the model was prepared.

The study then explored the feasibility of using the model as a guide for describing teaching across many classes as well as in an individual class. An empirical method, congruent with philosophical empiricism both in aesthetics and in education, seemed most appropriate.

Four professional educators were trained in the use of the model as an observation instrument. A holistic approach was used with a full day being the basic period of observation. The four observers spent one whole day observing and recording independently in the same classroom; a five point scale was used.

The empirical study was designed to test the model for viability in diverse classroom situations. To this end schools were selected from four different settings. Participating schools included a New York City private school, referred to as city-private, a New York City public school, referred to as inner-city-public, a Westchester County, New York public school, referred to as suburban-public, and a Fairfield County, Connecticut public school, referred to as exurban-public.

From each of the four settings, three classes were selected. Since diversity of teaching style was of interest in the testing of the model, each school principal was asked to suggest several teachers whose general teaching approaches were felt to be quite different from one another. Teachers were then interviewed personally and asked to volunteer to be observed one whole day.

Of the twelve participating teachers, four were men, eight women. The grade levels included were one first grade, one second grade, two third grades, three fourth grades, one

fifth grade and one sixth grade. The private school groupings were by age level and included one eight through ten year group, one eight and nine year group and one seven and eight year group.

Observations were planned for those days when the class and the regular teacher were together all or most of the day. When another teacher was in charge of class instruction for a period (music, art, or other specialist), observations were continued but the change in teacher was noted by the observer. It was assumed that individual teachers would incorporate or carry over the teaching of specialists to varying degrees and that this would then be reflected in the emerging teacher styles. Each of the four observers spent one whole day with each of three separate classes.

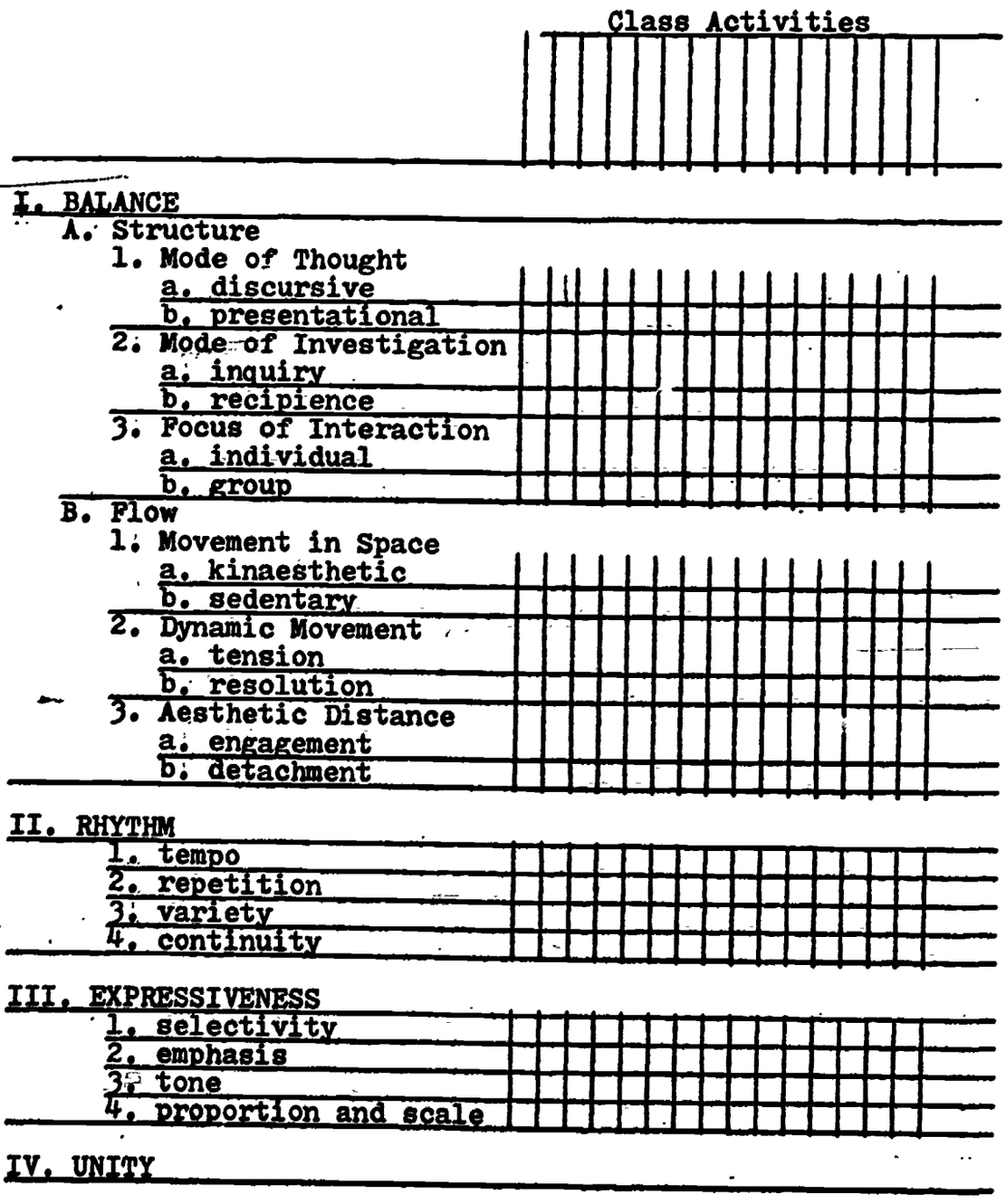
In addition to using the model as an instrument for systematic observation, the observers made some brief notation and commentary which might clarify, support or illustrate events leading to a particular numerical designation.

Description of the Model

A schematic visualization of the model which was used as an observation tool is shown (Figure 1). Brief explanations of the particular categories used will help clarify the language. (Persons wishing more detailed information, including the rationale supporting the four main divisions and the twenty specific categories, may write to University Microfilms, Ann Arobr, Michigan for a copy of the dissertation.)

FIGURE 1

A MODEL FOR THE ANALYSIS OF TEACHING BASED ON AN AESTHETIC MODE OF INQUIRY



Discursive Mode

In using the discursive mode in teaching the teacher's major tool is language. The teacher makes linguistically logical statements which may be paraphrased or interpreted for further clarity. He may define his terms or ask the students to explain the meanings of terms. The expectation is that the students will respond with language and that the response will be linguistically and logically related to the question (though it may not necessarily be correct.) The teaching of spelling or rules of grammar would typically fall into this category as would teaching arithemetic or mathematics. Discursive thought tends towards the establishment of laws, such as laws of economics or laws of physics, which become part of the critique of science.

Presentational Mode

The teacher using the presentational mode of instruction seeks to develop understanding through a direct appeal to the senses. Children may be led to experience joy or sadness, exaltation or peace through music or art or poetry. Visual aids and other non-verbal media may be used to bring greater immediacy to the study of social studies and science. The response expected from students will be physical, emotional and/or aesthetic and any linguistic response students may be called upon to make may be inadequate to convey the quality of their experience. Within this symbolic mode, students may play the role of audience or they may be creative participants exploring their own feelings and ideas and giving concrete expression to them.

Inquiry

The teacher using the mode of inquiry emphasizes the need for students to discover directly natural or man-made phenomena. The process may rely on the senses - the perceptual base of experience - as when students listen for sound or look to observe growth or change in plants and animals. The process may include mental and verbal speculation and interchanges as when questions of social existence or value are being examined. The process infers an openness towards ends that are not predetermined. It allows for what Bruner terms the elements of "effective surprise" and the "intuitive leap". The teacher is most frequently listening or in free dialogue rather than telling.

Recipience

Recipience refers to a mode of teaching that requires the students to assume a posture of receiving instruction. The teacher might be explaining or demonstrating the laws of art, science or grammar. He might be lecturing on the geography or customs of a country. He might be reading a story aloud. In each case the class would be listening or perhaps taking notes and conceivably asking specific questions. Another example of recipience would be the participation in rote exercises in which the students would be responding orally or in writing. In most instances students would be expected to repeat the facts or contained processes which had previously been established. Within this mode speculation is kept to a minimum, if countenanced at all, and emphasis is placed on transferring a given body of knowledge.

Individual Teaching

Individual teaching applies in the normal sense of intentional teaching to one child at a time. Its purpose is private, personal instruction during a given period of time. It is recognized that due to the nature of classroom instruction, other demands may be made on the teacher's attention during a period of individual teaching, but the criterion will remain the teacher's intention of a one-to-one relationship.

Group Teaching

Group teaching applies to intentional teaching to more than one student at a time. Though a student may be receiving particular attention as a member of a small or large group, the expectation is that others will listen and perhaps profit by the instruction - the element of privacy is removed, thus shifting somewhat the relationship between the teacher and the student. This relationship becomes more public and shared.

Kinaesthetic Activity

Kinaesthetic activity refers to physical actions or purposeful motion related to instruction and general class activity. Movements may be large, involving the whole body as in dance and circle games, or they may be small as in finger play. Since singing seems to be a borderline case, it will be categorized as kinaesthetic to the extent that it includes gestures in space and bodily movement in addition to the specific vocal apparatus. Art, however, will be included in this category since it is the movement of the

arm in fashioning a brush stroke or the pressure of the fingers in modelling clay that brings understanding of materials and their possibilities. Kinaesthetic activity further infers a shift in location giving the teaching picture another dimension.

Sedentary Activity

Sedentary activity is basically quiescent. The students may be seen as playing the role of audience as at a concert or traditional play. Though intellectual and emotional involvement may be high, the muscle sense is not called into play and spatial arrangements are stationary. Teacher-directed student activities which may be categorized as sedentary would include listening to teacher lectures, viewing films or filmstrips, engaging in class discussion, reading, and writing papers or exercises in any subject area.

Tension

Tension is reflected by the existence of ambiguities and personal anxiety in the students. It creates a drive towards learning and involvement in process and towards the isolation of and absorption in the problems to be solved. It provides a direction and momentum for study. The mood is one of agitation, of restlessness and of seeking. A new, or partially new, concept or experience is encountered, openning avenues that may be travelled to the unknown and the mysterious, shaking the students from their plateau of security. Tension exists for the teacher too as he actively participates in the teaching process. New problems are

confronted which resist known or complacent solutions. A feeling of anxiety results demanding new learning, new action and personal teaching expressiveness.

Resolution

Resolution, in teaching, is the solution of the problem and a feeling of rightness as to its determination. It carries with it the qualities of transitional peace and calm. It allows for a period of psychological rest and for replenishing of energy. It may be reflected in students by the mastery of a new skill or in the fresh and insightful recognition of substantive structure, of the ordering of content, of social relationships and of artistic and aesthetic experiences. The teacher, too, senses the resolution of educational problems and challenges. The ensuing satisfactions and achievements prepare him and stimulate him towards further dynamic movement.

Engagement

Engagement, in teaching, infers being carried along with the action, being committed to, absorbed in the creative teaching process. The sense is that of being a participant, of being in the act rather than of predetermining it or of being witness to it. A momentum is generated within which impulse and ideas are permitted broad expression. The teacher moves with the action, functioning vitally within the teaching role. Engagement presupposes a flexibility and personal passion, what Bruner calls "freedom to be dominated by the object." In this case the "object" is the teaching itself which encompasses interaction with students, subject

matter, materials, etc. Vital engagement is oblivious of time and space and may breach the normally accepted bounds. An awareness of audience, either as spectators or as active participants, must exist. Commitment has to be intentional.

Detachment

Detachment, in teaching, implies a critical awareness and willingness to step back and appraise the teaching situation. The teacher may reexamine the participation of students or the relevance of subject content in light of cultural and social influences bearing on the classroom. He may study the appropriateness of media or material. He may question his style or method of presentation. He may examine the quantitative or qualitative learnings of the students. He may proceed in this process alone or he may engage the students in critical analysis of a lesson, an activity, or a day in school. It is a time for reflection and the classroom becomes a "center for inquiry."

Tempo

In teaching, tempo refers to the qualitative pacing and sequencing of classroom events. To some degree tempo may be preplanned, but to a greater extent, the teacher takes his cues from the students' behavior, from the tone and conditions of the class. and adjusts his pacing accordingly. To the extent that the handling of tempo is built into the plan, the role of the teacher is similar to that of the musical composer or the playwright. But when the teacher is "on stage" and responsive to his audience, he takes on some of the sensibilities of the performing actor.

Repetition

Repetition, in teaching, refers to the recurring use of given ideas, skills, themes, activities, methods or organization for instructional purposes. It may be reflected in the establishment of class routines which serve as structure and guidelines to class social or academic behavior. It may be observed in rote teaching in which arithmetic facts or lines of a song are repeated. Repetition may be across disciplines as when ideas or themes from one area of study are restated to lend clarity or relevance to another. Repetition may also be used in the spiral curriculum to reinforce former learnings in readiness for teaching on a more advanced level. Repetitions may be contiguous or may be separated in time and space.

Variety

In teaching, variety encompasses all possibilities of deviation from sameness or repetition. It refers to range, variation and subtle nuances as well as to contrast. It includes improvisation or the spontaneous "playing on a theme" and the introduction of novel approaches and innovative techniques. Variety may be found within a teaching lesso . or across several lessons. Variety reflects the expressive imagination and the pedagogical creativity of the teacher. Contributions on the part of students become part of variety as they are accepted and incorporated in the teaching process.

Continuity

Continuity, in teaching, provides the systematic flow and progression within the organization of the teaching design. It develops the expectation that something more, something vital, is going to happen. It connects themes, ideas and activities. A segment of arithmetic or science flows into a richer, broader understanding. Relationships between studies become significant. Continuity may move backwards or forwards in time recalling past experiences or projecting new one. It aims towards an integrated whole and a realization of teaching as an aesthetically holistic enterprise while it recognizes the validity and relative separateness of parts of a teaching day.

Selectivity

Selectivity, in teaching, refers to the sensitivity as to precision and pertinence of teaching forms and content within a range of generic possibilities as they relate to teaching intent. Selectivity is reflected in choice of subject matter, classroom materials and media and teaching method. Selectivity takes into account the environment, the maturity, and level of preparedness of the students. It allows for activities that are precise and warrant specific, measurable evaluation as well as for those that are more open, calling for intuitive hunches and general evaluation. Selectivity permits decisions which vary with time available and the mood or atmosphere of the class. It includes teachers' spontaneous decisions as well as those that are preplanned.

Emphasis

Emphasis, in teaching, serves to establish focal points of interest and concern within the class life, environment and instruction. It points up significant priorities without eliminating supporting activities. It clarifies teaching intent and minimizes blandness or sameness. It may be expressed visually through bulletin boards, pictures, posters and charts. It may be reflected in length of time spent on a theme or in the intensity and depth of teaching. It is restricted to no one method of instruction and frequently uses many approaches. Emphasis, or dominance, might be contained within a given subject area and a limited time block, or it might spread over a school day, and possibly a school year. The use of emphasis facilitates "teaching to the point" and helps students understand the main direction of instruction.

Tone

Tone, in teaching, is the particular quality and prevailing spirit consonant with classroom purposes as they interact with the various elements within the class. Tone is a part of the very structure of teaching. It is a quality that is generated as teaching evolves; it cannot be added as an afterthought. Tone is reflected in the appropriateness of subject content, use of time and space, method and quality of human interaction. Tone, to be felt, must have some variability. Variability, though it may be subtle, helps differentiate the mood or feel of one activity as against another.

Proportion and Scale

Proportion and scale, in teaching, are reflected in the apportionment of the various teaching components (time, space, content, media, etc.). This apportionment affects clarity and educational economy and influences teaching expressiveness. An overabundance of materials to illustrate a point may lead to confusion rather than understanding. Or, for example, in teaching reading to first graders, an overly large proportion of phonics drill may deaden interest and slow the momentum of teaching and learning. A paucity of materials, however, or an insufficient proportion of time given to convey and enrich content may lead to emptiness, boredom and superficiality in teaching. Proportion and scale are related to no absolutes but are flexible and designed to express a theme concisely and make the meanings known.

Unity

Teaching, when examined from an aesthetic point of view, shares with the arts the quality of unity. At the end of a teaching day, the sensitive teacher has achieved a sense of closure, has produced an experience within the confines of a school day which is, nevertheless, not final but opens the way to further involvement. The achievement of unity lies within the intuitive awareness of the teacher and is to some extent a measure of his mastery of the art of teaching. Each teacher composes the design of his own teaching day. He apportions his use of time, space and subject matter.

He allows for individual and group variability. He draws relationships among subject areas, general concepts and social forces as well as a host of contingent and spontaneous occurrences. The teacher, unlike many creative artists working in other sensory forms, has a long-range design as well as a "canvas" for every day. For the purposes of this study, the experiences framed within a teaching day which form the picture the students and teacher take with them as they leave their class environment, will constitute the unit within which unity lies.

Findings

Reliability Study

Four trained observers spent one full school day observing independently in a fourth grade class in an inner-city public school which was not included in the empirical study. During the course of the day the students met wtih two special teachers, the physical education teacher and the music teacher, in addition to their regular classroom teacher. Observations and notations were made during all class periods. The global day descriptive ratings, however, apply only to the total class activities undertaken under the leadership of direction of the regular classroom teacher. The instruction and/or experiences of students during the two periods spent with other teachers entered into the global day ratings only to the extent that the classroom teacher integrated, built upon, repeated, or in some other way incorporated aspects of the parts of the day into the fabric of the whole.

TABLE 1

RELIABILITY CORRELATIONS AMONG SCORES OF FOUR JUDGES DURING ONE SCHOOL DAY

Pairs of Judges	Current Events	Physical Education	Music	Mathematics	Reading	Total Day
1, 2	.76	.73	.67	.67	.87	.68
1, 3	.84	.73	.84	.84	.62	.72
1, 4	.72	.85	.71	.62	.69	.67
2, 3	.87	.70	.80	.55	.52	.75
2, 4	.74	.73	.82	.74	.81	.89
3, 4	.85	.82	.77	.77	.72	.70
Average Mean Correlations	.80	.76	.77	.70	.71	.75

Average mean correlations for the four judges tabulated for the five discrete class periods and for the total day ratings ranged from .70 to .80. The highest average mean correlation was recorded during the current events lesson, the lowest during mathematics. The average mean correlation for the total day was .75. (See Table 1.)

Analysis of Data by Category

One of the expressed aims of this study had been to examine empirically teacher variability in the use of artistic dynamics and aesthetic sensitivity. It had been hypothesized that differences in the emerging patterns of teaching would be greater across the profiles of different teachers than within any one teaching profile. This proposition may be examined in different ways. One approach is to look across the day for a teacher's tendency or preference to perform or not to perform within each of the categories projected. The average variability within the individual teacher's per-period performance can then be compared with the variability among the twelve participating teachers.

The data used in this analysis included all natural class periods under the direction of the classroom teacher. Distinctions by subject area were not central nor was precise length of time spent in a particular activity of major concern. A rating scale from one to five, high to low, was used. One way factor analysis provided average within teacher variance and average between teacher variance. A

test for significance at the .05 level was made using a two-tailed F test. Thirteen of the twenty categories met this test. (See Table 2.) Because of the nature of the data, the analysis yielded not only confirmation of individual teaching style but also pertinent information relative to the separate categories as observed in individual classes and in the four school settings. (Tables analyzing each category are available upon request; Table 3 shows only total-day ratings.)

Discursive Mode: The discursive mode tended to be the preferred mode of the teachers in the three public schools regardless of grade level taught or the sex of the teacher. The city-private teachers, all female, tended to be less attracted to this mode. Between teacher variance was not shown to be significantly greater than within teacher variance though the tendency was in that direction.

Presentational Mode: A general tendency existed to use the presentational mode sparingly, especially in the three public schools. The private school teachers generally showed greater use of this mode and the inner-city-public school teachers were more consistent in their rejection of it. There was insufficient evidence as to whether or not a teacher's choice of mode was affected by the teaching of specialists on the staff. It was not established statistically that between teacher differences were greater than within teacher differences though the tendency was in that direction.

TABLE 2

ANALYSIS OF VARIANCE USING TWO-TAILED
F TEST AT .05 LEVEL OF SIGNIFICANCE

	Estimated Between Teacher Variance	Estimated Within Teacher Variance	F Value	Critical Value
I. BALANCE				
A. Structure				
1. Mode of Thought				
a. discursive	5.15	2.45	2.10	2.17
b. presentational	5.03	2.32	2.12	2.17
2. Mode of Investigation				
a. inquiry	4.62	1.51	3.06	2.17*
b. recipience	4.93	1.76	2.80	2.17*
3. Focus of Interaction				
a. individual	4.70	1.39	3.38	2.17*
b. group	2.80	1.63	1.71	2.17*
B. Flow				
1. Movement in Space				
a. kinaesthetic	1.39	1.98	.70	2.17
b. sedentary	1.61	1.64	.98	2.17
2. Dynamic Movement				
a. tension	4.06	.87	4.66	2.17*
b. resolution	2.15	.87	2.47	2.17*
3. Aesthetic Distance				
a. engagement	1.11	1.43	.78	2.17
b. detachment	3.57	.80	4.46	2.17*
II. RHYTHM				
1. tempo	3.38	.69	4.90	2.17*
2. repetition	1.65	1.13	1.45	2.17
3. variety	3.97	1.46	2.72	2.17*
4. continuity	10.94	.63	17.38	2.17*
III. EXPRESSIVENESS				
1. selectivity	5.22	.80	6.53	2.17*
2. emphasis	5.40	.75	7.20	2.17*
3. tone	4.00	1.20	3.33	2.17*
4. proportion and scale	5.75	.76	7.57	2.17*

* Significant

TABLE 3

TOTAL-DAY RATINGS FOR TWELVE REGULAR CLASSROOM TEACHERS

Teacher	1	2	3	4	5	6	7	8	9	10	11	12
I. BALANCE												
A. Structure												
1. Mode of Thought												
a. discursive	4	3	4	1	2	3	4	2	3	2	3	2
b. presentational	1	2	3	4	4	4	2	4	4	4	3	3
2. Mode of Investigation												
a. inquiry	3	3	2	5	4	3	3	4	3	3	3	4
b. recipience	3	3	3	2	3	2	3	2	3	2	3	2
3. Focus of Interaction												
a. individual	1	2	2	4	4	3	3	3	4	4	4	3
b. group	3	2	3	2	2	2	2	2	2	2	2	2
B. Flow												
1. Movement in Space												
a. kinaesthetic	2	3	4	4	4	4	4	4	4	4	3	4
b. sedentary	3	3	2	2	2	2	2	2	2	2	3	2
2. Dynamic Movement												
a. tension	1	2	3	4	3	3	2	2	3	3	2	2
b. resolution	1	3	2	4	3	3	3	2	3	2	3	3
3. Aesthetic Distance												
a. engagement	1	1	2	3	2	2	2	3	3	2	2	2
b. detachment	3	3	3	4	5	3	4	3	4	3	2	3
II. RHYTHM												
1. tempo	1	2	2	4	4	2	3	2	4	3	2	3
2. repetition	2	2	2	4	3	3	3	2	4	3	3	2
3. variety	1	2	3	3	3	2	3	3	4	2	2	2
4. continuity	1	2	2	3	3	1	4	5	5	2	3	3
III. EXPRESSIVENESS												
1. selectivity	1	1	2	4	2	2	3	2	3	2	2	2
2. emphasis	1	1	2	4	3	2	3	2	4	2	3	2
3. tone	1	1	2	4	3	2	2	3	3	2	2	2
4. proportion and scale	1	1	1	4	3	2	3	3	4	2	2	3
IV. UNITY	2	2	2	3	3	2	3	3	4	2	2	3

T 1 - City-private, ages 8-10, female.
T 2 - City-private, ages 8, 9, female.
T 3 - City-private, ages 7, 8, female.
T 4 - Inner-city-public, grade 3, female.
T 5 - Inner-city-public, grade 2, female.
T 6 - Inner-city-public, grade 6, male.
T 7 - Exurban-public, grade 4, female
T 8 - Exurban-public, grade 1, female.
T 9 - Exurban-public, grade 3, female.
T10 - Suburban-public, grade 5, male.
T11 - Suburban-public, grade 4, male.
T12 - Suburban-public, grade 4, male.

Inquiry: Seven of the twelve teachers maintained an approximately equal balance in their use of the modes of inquiry and recipience. However, the other five teachers were fairly consistent - one in the direction of high use of inquiry and four in the direction of low use of inquiry as a mode of investigation. The two teachers consistently low were in the inner-city public school. None of the city-private school teachers was seen as low in the use of inquiry. (Significant at .05.)

Recipience: Recipience as a mode of investigation was prevalent, at least in moderation, in all the classrooms studied. Three of the four male teachers observed were rated as high in the use of this mode as compared with two of the eight female teachers rated high. The city-private school was again different from the three public schools in that none of their participating teachers were seen as high in the use of this mode. The inner-city public school and the suburban-public school each had two teachers rated high. (Significant at .05.)

Individual Teaching: An individual focus of interaction was a basic part of the teaching pattern for the three city-private school teachers. The public school teachers were either quite consistent in their lack of preference for teaching in this style or tended to use it sparingly as something special. The male teachers were not different from the female teachers in this respect. (Significant at .05.)

Group Teaching: The major focus of interaction in the classroom was definitely the group. In no case was group interaction seen as low though two classes in the city-private school were rated average. (Not supported at .05.)

Kinaesthetic Activity: Kinaesthetic activities held low priority among regular classroom teachers. In most instances where such activity did exist it was under the direction of special teachers. (Not supported at .05.)

Sedentary Activity: Teachers in this study tended to maintain sedentary classroom activities most of the day. Where students had learning experiences with kinaesthetic activities, they were directed by special teachers. (Not supported at .05.)

Tension: The degree of tension towards learning generated within a class varied by teacher and also to some extent by school as well. The city-private school was seen as maintaining a rather high level of tension during the day with the suburban-public, exurban-public and inner-city-public schools following in that order. There was some tendency to maintain high levels of tension across the seventy-three periods observed. (Significant at .05.)

Resolution: There was a general tendency towards high levels of resolution in individual classes in three of the four participating schools. There was also an interesting pattern of high tension - average resolution in six classes which warrants further study in depth. (Significant at .05.)

Engagement: There was a strong tendency towards high levels of engagement on the part of most teachers, with no teacher being seen as low in this respect. The observed periods of relatively low teacher engagement occurred mainly during two types of conditions: either the students were being freed to direct their own activity as during free time or dramatics, or the lessons were highly structured requiring students to react to the workbook in precise, predetermined ways. (Not supported at .05.)

Detachment: The teachers' degree of detachment was found to be somewhat related to school setting. Teachers in the city-private school and the suburban-public school took more opportunities to step back for a moment and appraise the situation. There also was evidence of some relationship between lower levels of detachment and reported higher use of disciplinary meansures. (Significant at .05.)

Tempo: Though tempo, across all periods, tended to be fast, it was a rather individualistic trait and one in which any given class was fairly consistent. The city-private school classes, however, were somewhat exceptional in that all the classes studied moved at a rapid pace presenting the possibility that this may be a quality peculiar to that school as well as to the individual classes. (Significant at .05.)

Repetition: On a per-period basis there seemed to be little consistency in the use of repetition either within a teaching day or across the various schools. However,

examination of the total day observations revealed an emerging pattern in which higher use of repetition was positively related to faster tempo, and lower use of repetition was positively related to slower tempo. Repetition seemed to have had an affect on the qualitative pacing of teaching. (Not supported at .05.)

Variety: Variety across class periods during the day was found to be more prevalent than variety within any given period. (Significant at .05.)

Continuity: Continuity in teaching was found to be rather high within specific class periods and moderate to high across a full day. The exurban-public school differed from the others generally in that all its participating classes were reported as being low in the use of continuity both within class periods and across a school day. Significant at .05.)

Selectivity: Selectivity, in terms of form and content, was seen as being quite appropriate to the teaching intent in most of the classes observed. Qualitative differences appeared to be somewhat school related as well as teacher-specific with the city-private and the suburban-public school showing more sensitivity to this area. (Significant at .05.)

Emphasis: The use of emphasis, or dominance, took high priority, especially within individual teaching periods. Though differences among teachers were significant within

the parts of the day, only two of the twelve teachers observed seemed to ignore this characteristic in their teaching on a global day's basis. (Significant at .05.)

Tone: The shifting of tone to accommodate the specific and general requirements of different class periods was rather highly apparent in most classes but not consistently so in individual cases. On a full day's basis only one class was rated low and three average. There seemed to be sone relationship between sensitive shifting of class tone and the presence of class management problems. (Significant at .05.)

Proportion and Scale: The adjustment of proportion and scale to meet the varying teaching needs was typical of most teachers in the study. On a global day basis only two of the participating classes were seen as giving little priority to this quality. There was some within school clustering; all teachers in the city-private school were rated high. (Significant at .05.)

Unity: Unity, unlike the other categories in the model, was not examined at the conclusion of each lesson or activity. Rather it was described once, at the end of the class day and took into account the interrelationships of events throughout the day. Measurement of within teacher variances, therefore, was not feasible and no statistical tests were made.

The total day findings reveal that half the classes observed concluded their day with a strong feeling of unity.

Five classes achieved a sense of unity to a moderate degree and only one had little sense of wholeness or closure.

Conclusion and Discussion

The rather high mean reliability correlations achieved by the independent observers support the use of this instrument as a systematic approach to studying teaching. Since life in the classroom is an existential fact for students and teachers, the qualitative dimensions of teaching, which are examined within the categories developed and which contribute to the total direction and gestalt of a teaching day, might well be explored by teachers and supervisors together. It is definitely not suggested or recommended that this guide be used as a scoring device for teacher evaluation. For descriptive or critical analysis, however, it does represent a reliable approach for gaining insights into the art of teaching.

As a descriptive tool used in the exploratory, empirical study reported, the model provided information supporting, in most categories, the hypothesis that teaching variability would be greater among different teachers than would variability be within any one teacher's day. The categories not supported, see Table 2 , still hold interest and may prove useful in examining a larger sampling of classes. It had further been postulated that where within teacher variance did appear to be strong, that that variability would be a function of different subject content. Findings from the

study did not substantiate this expectation since teacher style was generally so extraordinarily stable.

The strength of the individuality of the teaching style was clear, could be described as in the section on Profiles (not included in this report), and was mostly private and unique. And yet, to some extent the influences of the school or community could be felt. This was particularly true in the three categories within the structural balance which tended to cluster in a pattern. A pattern of preference for the presentational mode, moderate to high use of inquiry as a mode of investigation, and heavy emphasis on individual teaching was found only in the city-private school. Interestingly enough, there was a tendency among teachers in the public schools of the wealthier suburban and exurban communities to structure their teaching more like the inner-city-public school teachers. All of the inner-city-public school teachers in the study, but only half of the suburban and exurban-public school teachers, avoided teaching in any of the areas which would require reliance on senses or feeling for verification of truth or correctness of response. One wonders if the teachers felt inadequate to deal with content in art, music, dance, theatre, if they had been desensitized to everything but the logical and scientific, or if they felt the arts were really only in the specialists' realm and thus not their responsibility. One also wonders whether the teachers believed that the sentient pleasures in

life are not suitable material for school study or if they felt pressured to pursue the three Rs. Would a study of a week rather than a day make a difference in these areas?

Within the three public school systems the balance between the use of inquiry and recipience was skewed in the direction of recipience as a mode of investigation. Three out of a total of five teachers described as relying heavily on this mode were man. (There were four male teachers in the total study.) Now that there are more men teaching in the elementary schools than would formerly have been the case, it would be interesting to take a larger sample of male teachers and study their teaching behavior. One might speculate, for example, that men would tend to be more directive than women and test this hypothesis. On the other hand, it must be noted, that the male teachers taught in the upper elementary grades (4, 5, 6). Would men teaching in early childhood classes encourage more inquiry on the part of students? A further study would be needed to answer this question.

The presence of a particular style which encourages more or less openness of opportunity for students to investigate phenomena, be they mental, physical or social, seems most likely to be reflective of the philosophic tone of a school. The set curriculum, the texts to be completed, and the yearly sequencing of courses of study, which were typical of the three public school systems included, probably were influential in having teachers adopt the direct

telling role more of the time. It may also be that the study teachers felt intuitively that the method of inquiry was appropriate for pedagogy only in small to medium doses.

The element of structure shich seems most closely related to a given school is that of focus of interaction. In the city-private school, and only in that school, work with the individual child was pursued in fact - not only in theory - most of the day. The style of the other teachers in the study was to rely heavily on a group approach, small or large groups, whereas the city-private school teachers used group instruction sparingly.

Though many motivating factors may enter into a teacher's decision to teach to the group, two seemed to be most pertinent to the classes studied. One was administrative ease and efficiency. Since the class, or a particular group, was studying the same lesson, it was much easier to present to the whole group than to individual students. It was also easier to share responses on the given material than to check each student separately. (Only when students are pursuing their individual and different interests or when they are truly progressing at private, idiosyncratic rates would the previous statement not be true.) A second significant factor was that of group dynamics. Some of the public school teachers particularly seemed eager to maintain group spirit or a club atmosphere, or, in one case, an intellectual debating society air. However, the important thing was to do

things together for the good of the group. This orientation appeared to influence the city, as well as the non-city, teachers. A third possible reason for groupness, related to the second, was to use peer pressure, as evidenced in the open competition and/or cooperation, as motivation for individual study.

The very great proportion of time that students (even in first and second grade!) spend in their seats might help explain some of the findings in Philip Jackson's study of boredom in classrooms. It is most typical when walking into a classroom to find the students sitting at work while the teacher stands or walks about. The teacher is flexing his muscles, causing his blood to circulate and lungs to receive fresh air, while the students sit and get sleepy. In terms of learning, students are seldom encouraged to use their kinaesthetic sense to locate themselves in space, to experiment with balance and direction, to come into contact with geography or to relate to units of measure by actually measuring large, as well as small, distances. To have one child pace off the feet in a room while the others watch is more typical than to have many students measuring many objects or spaces. The others sit. The teacher who engages in simple physical activities with students is rare and still more rare is one who will teach dance or full body pantomime.

There was no one really predominant relationship between tension towards learning and resolution. Half the

classes were described as reaching a level of resolution which was equivalent to the level of tension generated. In other words, where there was great agitation, unrest, and movement towards new understanding, there was also an approximately equal feeling of achievement of solution and psychological well-being. Where little tension was generated (Is this related to low level of teacher expectancy?), little feeling of satisfaction in achievement was reached.

Perhaps of more interest in terms of further study is the pattern found in the "high tension" group. Six classes were described as being generally high in this category. Two were also high in resolution, but four were seen as only average. Is this a result of preferred teacher style, of preplanning? Does the teacher want the students to end the day with some things unfinished - a real need to continue tomorrow? How does this affect student motivation to learn and attitude towards school? On the other hand, there were two classes in which tension was described as generally moderate but resolution high. Are these students bursting with success? Does success breed more success, or does success at relatively easy tasks breed complacency and unwillingness to tackle the more difficult undertakings? Are different styles more effective with different students? What difference does it make to students if there are daily patterns of class periods which alternate in tension from low to high as against patterns in which there is great consistency?

All the teachers tended to be quite actively engaged almost all the time they spent in the classroom. The city-private school teachers, who were so committed to individual instruction, were perhaps even more completely involved in instruction than the others. Less active engagement was evident among a few teachers during workbook lessons when the teacher had no control over the material and checked the responses much as a good teaching machine or program would.

Observers' notes indicated that in the four classes in which there was little evidence of teacher detachment, a good deal of time was spent on managing the class and disciplining students. This raises the question as to a possible cause-effect relationship which might warrant further study in terms of planned teacher style.

If the style of teaching derives its form from the categories described in Balance, it most likely assumes its flavor from those examined in Rhythm. This flavor, to some extent, is fashioned by the tempo at which a teacher and class move. Half of the classes in the study moved at a fairly brisk pace and only three were described as slow. The observations in the inner-city-public school proved to be of special interest. In this school, in which homogeneous grouping exists, the two classes with students of average academic ability were found to go through the day at a slow tempo, whereas the class decidedly low in ability moved along at a fairly rapid pace. This unexpected occurrence

seems to reflect the innate style of the teachers regardless of the "slowness" of the students. It would be helpful to know more about this phenomenon and its effect on the students.

The study also showed a pattern emerging in which a more extensive use of repetition ass positively related to faster tempos in teaching and a lesser use of repetition was positively related to a slower tempo. One might have assumed that much repetition would have consumed time that might have been used for new studies, would have slowed the action, and would probably have contributed to boredom in the classroom. However, the data from the study point to the likelihood that a fair amount of repetition probably clarified instruction and accellerated class momentum.

It also became quite clear that the quality, variety, was much more likely to become apparent in relation to a full day's activities than within a given lesson. This finding is of special significance to researchers who might wish to confine their observations to shorter time periods and perhaps thus miss the quality completely.

In an unexpected reversal, continuity, unlike variety, seemed to make itself felt more within a given period than across a day. The implication to be drawn was that much attention was given by many teachers in the study to making connections within a subject area. (e.g. Today's mathematics was likely to review yesterday's and project tomorrow's.) However, integration of ideas across disciplines was somewhat less prevalent.

Of the four major groupings in the model, Balance, Rhythm, Expressiveness and Unity, Expressiveness contains categories which probably demanded most of the observers in terms of professional, subjective interpretation. The anticipated result was that independent observer ratings made during the reliability study would be most divergent in these areas. However, this proved not to be so. Correlations in these categories were just as high, or higher than in others.

There had also been some question as to the inclusiveness of the category, selectivity. It had been designed so as to incorporate observations of sensitivity to both form and content in relation to the intent of teaching to a particular class. There had been some feeling that study of the data might indicate a need to divide it in two. A high proportion of average ratings would have supported this feeling. However, analysis showed that only fifteen of the seventy-three observed periods had, in fact, been described as average and observers reported having no difficulty in reaching decisions. It is now felt that sensitivity of selection to form and to content as related to intent probably do go together in teaching and are so perceived by observers.

The data showed that the teacher who rambles on, or who permits the class to meander to the point of losing the central focus, was not representative of the study teachers. All but two enacted their reaching role so that the focus of instruction was clear. This kind of information might be

helpful in working directly with teachers. It would be interesting to know what the teachers see as central and what importance they place on the secondary or supporting activities. From the teacher's point of view, a clarification of what he sees as emphasis (or dominance-subordination) would guide him in establishing priorities and values which could then be transposed into teaching practices. For the student, such clarification would help him discriminate the significant from what William James calls the buzzing, booming perceptual world in which he lives.

The characteristic tone maintained in a class, or the variation in tone affected during different class activities, appears to be an intrinsic quality of a teacher's expressiveness regardless of the particular class being taught or the school of which it is a part. This conclusion, though tentative and needing further study, is supported by this study generally and by two cases specifically. First, in a class in which the observer found the teaching tone, under the direction of the regular teacher, to be generally inappropriate to the intent of teaching throughout the day and in which management and discipline problems persisted, a dramatic change in tone was evident when the science teacher came in and presented a lesson. The science teacher and the students interacted with the subject content in a manner which fostered the pursuit of scientific investigation. (The differences in this teacher's style were also reflected in most of the other

categories examined.) A similar high level of congruence of purpose among teacher, students and content was not evident during other parts of the day.

A second support for the above tentative conclusion is based on the assumption that it would be more difficult to maintain a tone highly appropriate to instruction when working with students who had a history of school failure and frustration. And yet, in a class composed entirely of such students, the teacher in fact shifted from activity to activity in such a manner as to establish qualities of tone most suitable to the group and the various parts of the day. Both classes described were in the same school thus neutralizing the influence of school and community.

Most teachers in the study were fairly sensitive to the need for proportion and scale in teaching. This study has no means of determining whether the sensitivity was due to teacher preplanning or if, like the nightclub entertainer described by Eisner, the cues were taken from the audience during the presentation. Nevertheless, only two teachers, in different school systems, seemed to be indifferent to this need. In both these classes and only in these classes, observers' notes indicated student restlessness and confusion with attendant discipline problems.

If the beginning of a school day is instrumental in establishing a gestalt, or overall feeling for time, place and people interacting in special ways, the culmination of

the day, which sees the end of this playing out of the action, even if only temporarily, is what brings with it a sense of closure, of wholeness and of relative rest. According to the observers in this study half the classes ended on a note of high satisfaction, of a day well lived, of unity. In terms of the vulnerability of observers to boredom, this finding was rather surprising. There had been some expectation that a full day's observation might influence class descriptions in a negative way. This was certainly not borne out by the facts. The one class that had been reported as truly lacking in unity had also been seen throughout the day as very weak in many of the qualities inherent in the art of teaching (as here described).

This study has attempted to open a new way of thinking about and analyzing teaching. In a way it presupposes that as art communicates more effectively the closer it gets to meeting its own intrinsic criteria, so too will teaching better achieve its goals as it approaches its own artistic form.

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